FREQUENTLY ASKED QUESTIONS

1. What is a benchmark?

A benchmark is a standard of measurement for investment performance. One of the more common types of benchmarks is an index which, in this case, measures the aggregate return of a basket of similar private investment funds. Cambridge Associates also provides other statistics – for instance, vintage year medians and performance multiples – that would be useful for benchmarking purposes, but are not technically indices.

2. Who are these benchmarks designed for and how are they used?

The benchmarks are designed to provide private equity and venture capital investors and investment managers with a way to measure their investment performance against funds in the same asset class and vintage year. In addition to releasing them to the public, Cambridge Associates utilizes the benchmarks when measuring client performance and in evaluating manager performance.

3. What is the difference between private equity and venture capital?

Private equity encompasses private investments resulting from a number of strategies (e.g., buyouts, mezzanine and subordinated debt investments) typically involving established companies, including those that may be in need of restructuring. Venture capital is a strategy within private equity that focuses on investing in new companies, often with high growth rates.

4. Why do you compare VC and PE returns?

The primary reason for the comparison is to get a reading on what is "working" in the current market environment: Has investing in early-stage companies paid off more than investing in established businesses in need of restructuring? Are macroeconomic factors favoring one asset class over another?

5. Why do you compare the benchmarks to public market indices?

Comparing performance of private investments to public markets (i.e., the stock and bond markets) allows investors to judge the decision to take on the risks (e.g., illiquidity) associated with private investments.

6. What are "alternative assets"? Are PE and VC considered alternative assets?

"Alternative assets" refer to asset classes – apart from traditional investments like stocks and bonds – included in portfolios for the purpose of return enhancement and/or diversification.

They include private equity, venture capital, hedge funds, real estate, energy and precious metals. Alternative assets tend to be less liquid than traditional investments and thus may require longer investment horizons and vehicles designed to accommodate that.

7. What is a vintage year, and why is it important?

A vintage year is the legal inception year for a private investment fund, which is not always the year in which the first capital is invested. Vintage year statistics are critical to assessing an individual fund's performance because they provide a similar universe for comparison.

8. The Cambridge Associates commentaries talk a lot about comparative size vintages. Why is this important?

Because the index is derived by cash flows, the largest funds and largest vintages have the most impact on the index's return. By pointing out trends in the largest vintages, the commentaries help inform investors about what is having the most influence on the index at a given point in time.

9. What does it mean that "vintage year fund-level returns are shown net of fees, expenses and carried interest?"

There are two levels of returns discussed in the Cambridge Associates benchmark commentaries: fund-level and company-level. Fund-level returns reflect what the limited partners (investors) earn after they pay management fees and performance fees (carried interest). Company-level returns are gross (i.e., before fees). We use the company-level returns when discussing sector and geographic regions because they are good indicators of how fund returns are earned.

10. What is a capital call? A capital distribution?

Also known as drawdowns or capital contributions, a capital call is an installment of a limited partner's (investor's) capital commitment paid to the general partner to effect an investment. The partnership agreement provides specific instructions on how and when capital contributions are to be made. In general, limited partners must comply with a request for capital within 10 to 20 business days of receipt of a capital call notice. The timing of capital calls and the use of capital once it has been contributed to the partnership are important considerations in fund performance monitoring and evaluation.

A capital distribution is a return of capital to limited partners by the general partner that is the result of a sale or disposition of an asset (i.e., a company held in the fund's portfolio).

11. What is the significance of initial public offerings (IPOs) to PE and VC returns?

The IPO market has historically been one avenue for exiting or selling an investment. A healthy IPO environment allows investors to sell stakes in companies, while an unhealthy environment can force fund managers to hold onto companies, which could lead to further financings and a deterioration of returns due to the passage of time.

12. Who are the most common investors in PE and VC funds?

Global institutional investors and qualified private investors, including endowments, foundations, pensions, sovereign wealth funds and family offices, comprise the majority of PE and VC investors.

13. What are the differences between general partners and limited partners?

General partners (GPs) are the fund managers, and limited partners (LPs) are the investors in the funds. GPs and LPs invest alongside each other. LPs typically provide an overwhelming percentage of total fund capital, often 98%.

14. What are leveraged buyouts, and why are they relevant to these benchmarks?

A leveraged buyout involves the acquisition of an existing company or of a division of a larger company. The acquisition comes primarily from debt, but also includes a portion of equity which is supplied by the buyout sponsor, i.e., the new company. The debt portion of the transaction can include secured debt (senior debt), supplied mainly by banks, as well as subordinated debt, supplied from a variety of sources, which has a higher interest rate than the senior debt but is not secured by the assets of the company. Buyout funds are a large portion of the PE universe; they create, provide the equity for and invest in the new company executing the acquisition.

15. Why does Cambridge Associates report quarterly returns for an investment designed to be long term?

Limited partners find it useful to understand the direction that performance is heading vis-á-vis peers in order to make decisions on whether or not to reinvest with a particular manager.

16. Why are all of Cambridge Associates quarterly commentaries based on the quarter that ended six months earlier?

Due to the time required for general partners to compile and corroborate private investment performance data, there is a quarter lag in the release of the data by managers. Once Cambridge Associates has received data from the managers, they process and analyze it.

17. How does Cambridge Associates obtain return data from the funds in the benchmarks?

Cambridge Associates sources data primarily from the quarterly unaudited and annual audited partnership financial statements that managers (GPs) provide to their clients as LPs. Database records are entered and stored on the fund, client and portfolio levels. To ensure completeness and accuracy, the data undergoes an extensive series of automated and manual quality control processes as it is placed in the database. Cambridge uses many other procedures and practices to maintain data accuracy. Those include multiple meetings with managers.

18. Does Cambridge Associates pay for the data?

No. Cambridge Associates does not pay managers for the data included in the benchmarks. Managers that participate in the benchmarks do so to receive complimentary copies of our benchmark reports that contain performance metrics useful for comparative analyses.

19. How do you know the data the funds provide to Cambridge Associates are accurate?

Cambridge Associates derives its indices solely from financial data included in financial statements and other documents (such as capital calls, dispositions, and other communications to LPs) released by fund managers and their accounting firms.

20. How does Cambridge Associates select the universe of PE/VC funds in the indices, and how does this universe differ from other indices that aim to track PE/VC performance?

Cambridge Associates' goal in creating the benchmarks is to provide accurate, comprehensive data that enable institutional investors to make smart investment decisions. The benchmarks are derived from the performance results of more than 5,600 private partnerships and nearly 70,000 portfolio company investments. Clients rely on this data in part because it is derived from information in financial statements shared by fund managers and released by their accounting firms. Importantly, the benchmarks include funds that are potentially "institutional quality" (i.e., suitable for large, sophisticated investors).

21. Why does Cambridge Associates data differ from returns provided by other providers of PC/VC data?

Cambridge Associates can only speak to how its data is compiled, which is directly from the fund managers themselves and their accounting firms (as opposed to data collected indirectly via database searches and freedom of information requests). Cambridge believes this approach – including their due diligence and quality control processes – is reliable and accurate.

ABOUT MODIFIED PUBLIC MARKET EQUIVALENT (MPME)

22. What is Cambridge Associates mPME?

Cambridge Associates mPME is a proprietary private-to-public comparison that evaluates what returns would have been achieved had the dollars invested in private investments been invested in public markets instead. mPME attempts to answer the fundamental question investors ask themselves about their private investments: are the returns from private investments worth the illiquidity and administrative burden incurred?

23. How does mPME work?

mPME is a virtual replication of private investment cash flows invested under public market conditions. Private investment contributions are invested "on paper" in a chosen public market index and distributions are taken out in the same proportion as in the private investment. With each distribution, mPME "sells" the same proportion of the dollar value of shares owned by the public equivalent as the private investment sells in private shares.

The same metrics typically used to evaluate private investments, like multiples of invested capital and internal rates of return (IRR), can also be generated in mPME analyses. If the private fund's returns exceed the mPME returns, the private fund has added value relative to the public market. Investors are then in a better position to judge whether or not the value added by the private fund was sufficient to offset the illiquid nature of the investment.

24. How does mPME change the way to look at the performance of private investments? When should mPME be used instead of Cambridge's existing private benchmarks?

The most commonly-used approach to evaluating private investment performance is to compare a specific fund's performance to that of a benchmark representing the performance of a pool of similarly positioned private funds. This is called a private-to-private comparison. This comparison helps investors understand if they allocated their money wisely across fund managers, strategies, and geographies within the private universe.

However, investors also want to understand whether the decision to allocate money to private investments rather than a passive public index was a good one. Public market equivalent (PME) benchmarks can be used to answer that question.

25. What is the difference between Cambridge's mPME and other public market equivalent methodologies?

While other public market equivalent methods have merit, Cambridge Associates mPME is uniquely designed to consistently quantify private versus public value-added across funds, strategies and portfolios, with a minimum of external assumptions and fixes or adjustments. The only external input required is the choice of a public index for comparison. mPME is also designed to avoid the "negative NAV" issue (situations in which private distributions exceed the public vehicle's available net asset value) which can be a problem with some alternative methods. Finally, mPME can employ widely-used private metrics, like multiples of invested capital and internal rates of return (IRR).

26. What does mPME reveal about the long term performance of private equity and venture capital that is currently unknown?

Public market returns should be measured using Time Weighted Returns and private returns should be measured using Money Weighted Returns; however, these two types of returns are not comparable in an "apples to apples" way. mPME helps bridge this gap by consistently quantifying the relative performance of public and private investments. mPME analyses confirm Cambridge Associates view that, over the long run, many private investment strategies (including private equity and venture capital) have outperformed their public market alternatives.

27. Why is mPME being offered now?

mPME is being added to Cambridge Associates' benchmark reports, fund manager due diligence, and client portfolio analysis because none of the private-to-private measures adequately address the broader question of whether private investments have been additive vs. the alternative: public investments. It is not uncommon to see private portfolios underperform their private benchmarks while at the same time significantly outperforming public indices on an mPME basis; in such cases (depending on the level of private value added) the high level decision to allocate money to private investments was the correct one. Adding mPME to the conversation allows investors to see that point more clearly.

KEY DEFINITIONS

Internal Rate of Return (IRR)
Internal Rate of Return or IRR is the standard computation methodology – the standard measure of returns and performance – used for private investments. It is based on cash-on-cash returns over equal periods, modified for the residual value of the investment. Under this methodology, results are measured relative to the amount of funds under management. Practitioners of this methodology argue that dollar weighting cash flows appropriately accounts for the fund managers' ability to draw down capital at their discretion.

Modified Public Market Equivalent (mPME)
Cambridge Associates mPME is a proprietary private-to-public comparison that evaluates what returns would have been achieved had the dollars invested in private investments been invested in public markets instead. mPME attempts to answer the fundamental question investors ask themselves about their private investments: are the returns from private investments worth the illiquidity and administrative burden incurred?

Net Asset Value (NAV)
The current value of an investment held by private investment managers. Net asset value is the equivalent of "market value" for marketable investments, such as stocks and bonds.

End-to-end return
End-to-end returns measure an investment's performance between any two points in time (such as a quarter, a year or a specific multi-year period). It takes into account the investment's Net Asset Value (NAV) at the starting point, its cash flows during the period and the ending NAV. It is an IRR calculation over a specified time period.

Carried interest
Also known as the carry, profit share or override, carried interest is the performance-based compensation for the general partner of the fund. The carry can be calculated in several different ways and is usually payable only after certain conditions have been met. In general, the carried interest is a fixed percentage (20%) of cumulative net gains of the partnership.

Pooled Returns
Pooled returns represent the net return calculated on the aggregate of all cash flows and market values as reported by individual fund managers in their quarterly and annual audited financial reports. These returns are net of management fees, expenses and performance fees that take the form of carried interest.

Realization Ratios
Realization ratios are calculations that give potential limited partners insight into how much of the fund's return has actually been paid out to investors. There are several ratios:

- **Distribution/paid-in (DPI)** measures the actual distributions received relative to contributed capital.
- **Residual value/paid-in (RVPI)** measures the amount of contributed capital still tied up in the equity of the fund.
- **Total value/paid-in (TVPI)** measures the residual value plus distributions received to date relative to contributed capital.

(Note: Realization ratios included since inception IRR exhibits are based on actual pooled dollar values for each vintage year, not individual fund averages.)

Enterprise Value
Enterprise value represents a company's equity (or market capitalization) plus debt.

Distressed Securities
The securities of a potentially promising firm that has been experiencing temporary operational difficulty. Investors think that they can turn the company around and sell it at a higher price. Distressed investing involves using this strategy with a company at or near bankruptcy.

Exit
Exit refers to the disposition or sale of an asset or portfolio company.

Subordinated Debt
Most buyout funds purchase equity in their target companies. However, a sizable amount of capital is also devoted to the purchase of subordinated debt or "mezzanine debt" (so called because of its position in the capitalization structure). This type of debt typically features equity "kickers" that enable investors to participate, at least in part, in the appreciation in the equity value of successful buyout investments.

Mezzanine Fund
Mezzanine funds purchase a company's senior or subordinated debt with warrants or options (which give the investing fund the ability to convert all or some of the debt to equity) for the purpose of achieving a combination of current income and long-term capital gain. Mezzanine investments have a lower risk/return than venture capital, buyouts or distressed investments.

Funds of Funds
Private equity firms organized to invest as limited partners in numerous venture capital, buyout and/or other private equity funds, creating a portfolio of funds that give investors "instant private equity diversification."

Secondary Funds
Secondary funds purchase the interest in a private equity fund from a seller – another LP – looking to exit from that fund early. Because they often buy partnership interests in funds that have already begun investing, secondary funds typically provide returns earlier than other private equity funds.

Growth Equity
Fund where 50% of the capital is deployed or intended for companies that exhibit organic revenue growth in excess of 10%, are profitable (or have a clear path to profitability) and have no technology risk and limited market risk. In addition, the fund manager intends to be the first and likely last institutional investor, acquires a minority stake, is the sole or largest institutional shareholder and employs low to no leverage at the time of investment.

Alpha
Alpha represents the average return produced by a portfolio, independent of the market's (benchmark's) return. Alpha measures the component of a portfolio's return that is attributable to factors, such as stock selection, style and industry exposure, other than benchmark exposure.

Beta
Beta measures the sensitivity of the portfolio's rate of return to changes in the market's rate of return, and, therefore, measures the amount of risk in the portfolio that cannot be removed through diversification. Beta measures only the market risk of the portfolio and gives no indication of the non-market risk.

Arithmetic Mean
Arithmetic mean is a measure of relative performance that averages the individual fund IRRs included in a vintage year.

Median
Median, also a measure of relative performance, is the middle-fund IRR of the group of individual fund IRRs included in a vintage year. The median should be close to the arithmetic mean, but it removes the effect of outliers (for instance, an extremely high or extremely low number).

Standard Deviation
Standard Deviation is a measurement of the variation from the mean for each sample set of vintage year funds (illustrates dispersion of returns). A high standard deviation indicates a wide disparity among manager returns.